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ATOMIC ENERGY COMMISSION

POSITIONING OF TROOPS AT ATOMIC WEAPONS TESTS

Note by the Secretary

The Director of Military Application has submitted the attached memorandum for circulation to the Commission.

ROY B. SHAPP
Secretary

K-34

[Handwritten signature and initials over a stamp]
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HRE-0731

L-5

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF STAFF
WASHINGTON 25, D.C.

CS 471.6

February 10, 1953

MEMORANDUM FOR: CHAIRMAN, MILITARY LIAISON
COMMITTEE

SUBJECT: Positioning of Troops at Atomic Weapons Tests

1. In accordance with the letter from the General Manager of the Atomic Energy Commission, dated 8 January 1953,* in which it is agreed that the Department of Defense will assume responsibility for the safety of military personnel participating in maneuvers such as the Desert Rock maneuver in Nevada, the Army has prepared safety criteria for participation of its troops. These criteria are as follows:

- a. Overpressure - five (5) pounds per square inch.
- b. Nuclear radiation - six (6) roentgens at any one test, of which no more than three (3) roentgens is prompt, whole body radiation, with the further provision that no individual will receive more than six (6) roentgens in any six months' period.
- c. Thermal radiation - one (1) calorie per square centimeter.

2. Recognizing that there are certain variables in the expected yield of weapons, in meteorological conditions, and other factors associated with these tests, the maneuver commander will be required to use the following detailed criteria as a basis for positioning troops at the forthcoming series of atomic tests:

a. For tower shots -

Maximum Predicted Yield	Troops In Open	Troops In Trenches
1 to 5 KT	4,500 yds	3,500
5 to 10	6,500	3,500
10 to 15	8,000	3,500
15 to 20	9,000	3,500
20 to 25	10,000	3,500
25 to 30	11,000	3,700
30 to 35	12,000	3,800
35 to 40	12,000	4,000

* Enclosure: Copy on file in Division of Military Application.

On 10 February 1953, the following information regarding the proposed tests of the Atomic Energy Commission was received from the Department of Defense, Office of the Chief of Staff, Washington, D.C.:
See also the report of the Department of Defense, Office of the Chief of Staff, Washington, D.C., dated 10 February 1953, regarding the proposed tests of the Atomic Energy Commission.

L-6

K-34

L-5

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b. For 280mm gun delivered missiles - add 1,000 yards to distances given in paragraph 2a, above.

c. For aircraft delivered bombs - add 3,000 yards to distances given in paragraph 2a, above.

d. Troop positions must be located so that a gun or aircraft delivered weapon is delivered along a line in front of and parallel to the troop position.

3. In addition to the above exposure criteria that will apply to large numbers of troops, there is a very basic need to explore troop reactions in foxholes as close as 1,500 yards to ground zero. This need is based on the fact that detailed analyses of weapons effects have led us to furnish doctrine to our field commanders which would indicate that troops in deep foxholes would expect to receive little or no injury when stationed as close as 1,500 yards to a 20 kiloton explosion at operational heights of burst. Accordingly, discretionary authority is being issued to the maneuver commander which will permit stationing of a small number of selected volunteers who are cognizant of atomic weapons effects, in foxholes as close as 1,500 yards to tower shots. The minimum distance to be selected at the maneuver will be based on advice of the technical director as to the certainty of the estimated yield, the local meteorological conditions and similar influencing environmental conditions, as well as the limitation that these selected volunteers shall not be exposed to overpressures above eight (8) lbs P.S.I. measured at ground level, nuclear radiation greater than ten (10) roentgens at any one test of which no more than five (5) roentgens shall be prompt, whole body radiation, or thermal radiation greater than one (1) calorie per square centimeter. In addition, no volunteer shall be permitted to receive more than twenty-five (25) roentgens of nuclear radiation during the whole UPSHOT-KNOTHOLE operation. There will be no more than twelve (12) volunteers at any one shot.

4. It is hoped that the careful use of these small groups of informed volunteers will help us to confirm our published doctrine, or give us some basis to change it.

5. It is requested that this plan be called to the attention of the Atomic Energy Commission for their information.

BY DIRECTION OF THE CHIEF OF STAFF:

/s/ John C. Oakes

JOHN C. OAKES
Brigadier General, GS
Secretary of the General
Staff

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K-34

L-5